REMARKS

1. Status of the Claims and Formal Matters

Claims 1-20 are pending in this application. Claims 9-10 and 13-20 are withdrawn from further consideration. Claims 3-4 are hereby cancelled without prejudice to pursuing these claims in a continuing application. Claims 1-2, 5-8 and 11-12 are amended. Upon entry of these amendments, claims 1-2 and 7-20 are pending with claims 1-2, 5-8, 11-12 and 14 under active consideration. Applicants respectfully request entry of the amendments and remarks made herein into the file history of the present application.

The specification is amended at page 1 to add a reference to each earlier filed application for which the benefit of an earlier filing date is claimed.

The specification is amended at paragraph [0051] to add sequence identifiers to the disclosed sequences.

The specification is amended at paragraph [0054] to add sequence identifiers to the disclosed sequences.

The specification is amended at paragraph [0057] to add sequence identifiers to the disclosed sequences.

The specification is amended at paragraph [0066] to add sequence identifiers to the disclosed sequences.

The specification is amended at paragraph [0146] to add sequence identifiers to the disclosed sequences.

The specification is amended at paragraph [0151] to correct typographical errors and add sequence identifiers to the disclosed sequences.

The specification is amended at paragraph [0157] to add sequence identifiers to the disclosed sequences.

The specification is amended at paragraph [0160] to add sequence identifiers to the disclosed sequences.

The specification is amended at Table 2 to add column "G-SEQ ID" which lists the SEQ ID NO for the top nucleic acid sequence disclosed the "BINDING-SITE" column. The specification is also amended at Table 2 to change the previous "SEQID" column label to "T-SEQID." The specification is also amended at Table to add sequence identifiers in the "T-

SEQID" column for those nucleic acid sequence disclosed in the "BINDING-SITE" column without a sequence identifier.

Claim 1 is amended to recite an "isolated" gene, support for which may be found at paragraphs [0011] and [0012]. Claim 1 is also amended to recite that the gene is an HIV gene, support for which may be found throughout the specification, notably at paragraphs [0164], [0178], [0192], [0206], [0220], [0234], [0248], [0262], [0276], [0290], [0304], [0318], [0332], [0346] and [0360]. Claim 1 is also amended to recite that the gene encodes an RNA of about 50 to about 120 nucleotides, support for which may be found at claim 1 as originally filed. Claim 1 is also amended to recite that 18 to 24 nucleotides of a first portion of the encoded RNA are at least 50% complimentary to 18 to 24 nucleotides of a second portion of the encoded RNA, support for which may be found at Table 1 and paragraph [0018]. Claim 1 is also amended to recite that at least one of the first or second portion of the RNA is at least 63% complimentary to 18 to 24 nucleotides of a human gene, support for which may be found at Table 2 and paragraph [0018].

Claim 2 is amended to recite an isolated gene that comprises a plurality of genes according to claim 1, support for which may be found throughout the specification, notably at Figure 9, paragraphs [0372] and claim 2 as originally filed.

Claim 5 is amended to recite that the RNA encoded by the DNA of claim 1 is capable of modulating expression of the human gene, support for which may be found at claim 5 as originally filed.

Claim 6 is amended to recite that the binding site sequence of the human gene is located in an untranslated region of the RNA encoded by the human gene, support for which may be found at claim 6 as originally filed.

Claim 7 is amended to recite that the binding site sequence of the human gene is located in the 3' untranslated region of the RNA encoded by the human gene, support for which may be found at paragraph [0069].

Claim 8 is amended to correct antecedent basis.

Claim 11 is amended to recite that the gene expression inhibition system comprises a vector of claim 8, support for which may be found at claim 8 as originally filed. Claim 11 is also amended to recite that the gene expression inhibition system comprises a means for inserting the

vector into a cell, support for which may be found at paragraph [0026] and claim 8 as originally filed.

Claim 12 is amended to correct antecedent basis.

2. Patentability Objections – Sequence Rules

At page 2 of the Office Action, the Examiner objects to the disclosure for allegedly failing to comply with the requirements set forth in 37 C.F.R. §§ 1.821-1.825 (the "Sequence Rules"). The specification has been amended to provide sequence identifiers for recited sequences, as set forth above. The Sequence Listing has been amended to correctly identify the source organism for the target gene binding site sequences shown in Table 2 as "human," support for which may be found throughout the specification as originally filed including Table 2. Applicants submit herewith a replacement Sequence Listing in accordance with 37 C.F.R. §§ 1.821-1.825. Accordingly, Applicants respectfully request that the objection for failing to comply with the Sequence Rules be withdrawn.

3. Election

At pages 2-4 of the Office Action, the Examiner requires restriction to one of the following inventions under 35 U.S.C. 121:

I. Claims 1-8, 11-12 and 14, drawn to a bioinformatically detectable novel viral gene, a probe comprising said novel gene, a vector comprising said novel gene, a kit comprising said vector and a vector inserter and a kit comprising said probe and a gene expression detector.

II. Claims 9 and 10, drawn to a method of inhibiting translation of at least one gene comprising introducing the vector of claim 10 into a cell.

III. Claim 13, drawn to a method of detecting gene expression using a DNA probe that comprises a bioinformatically detectable novel gene.

IV. Claim 16, drawn to an antiviral substance capable of neutralizing RNA comprising complementarily binding the RNA.

V. Claim 17, drawn to an antiviral substance capable of neutralizing RNA comprising immunologically neutralizing RNA.

VI. Claim 19, drawn to a method of anti-viral treatment comprising neutralizing RNA comprising synthesizing, transfecting and complementarily binding RNA.

VII. Claim 20, drawn to a method of anti-viral treatment comprising neutralizing RNA comprising immunologically neutralizing RNA.

Applicants elect without traverse Group I, claims 1-8, 11-12 and 14, drawn to bioinformatically detectable novel viral gene, a probe comprising said novel gene, a vector comprising said novel gene, a kit comprising said vector and a vector inserter and a kit comprising said probe and a gene expression detector.

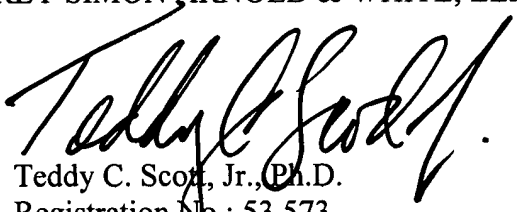
4. Conclusion

Applicant respectfully submits that the instant application is in good and proper order for allowance and early notification to this effect is solicited. If, in the opinion of the Examiner, a telephone conference would expedite prosecution of the instant application, the Examiner is encouraged to call the undersigned at the number listed below.

Respectfully submitted,

HOWREY SIMON ARNOLD & WHITE, LLP

Dated: July 20, 2005

By: 

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APPENDIX A

For the convenience of the Examiner, Applicant presents herewith a copy of the claims that will be pending upon entry of the present amendments.

1. (currently amended) An isolated HIV gene encoding an RNA of about 50 to about 120 nucleotides, wherein a first portion of the RNA of 18 to 24 nucleotides is at least 50% complementary to a second portion of the RNA sequence of 18 to 24 nucleotides, and wherein at least one of the first or second portion of the RNA is at least 63% complementary to a binding site sequence of 18 to 24 nucleotides of a human gene.

2. (currently amended) An isolated HIV gene comprising a plurality of genes according to claim 1.

3. (canceled)

4. (canceled)

5. (currently amended) The gene according to claim 1 wherein said encoded RNA is capable of modulating expression of said human gene.

6. (currently amended) The gene according to claim 1 wherein said binding site sequence is located in an untranslated region of RNA encoded by said human gene.

7. (currently amended) The gene according to claim 6 wherein the binding site sequence is located in the 3'untranslated region of the RNA encoded by said human gene.

8. (currently amended) A vector comprising the gene of claim 1.

9. (withdrawn) A method of selectively inhibiting translation of at least one gene, comprising introducing the vector of claim 8 into a cell.

10. (withdrawn) A method according to claim 9 and wherein said introducing comprises utilizing RNAi pathway.

11. (currently amended) A gene expression inhibition system comprising the vector of claim 8 and a means for inserting said vector into a cell.

12. (currently amended) A probe comprising the gene of claim 1.

13. (withdrawn) A method of selectively detecting expression of at least one gene, comprising using the probe of claim 12.

14. (original) A gene expression detection system comprising: the probe of claim 12; and a gene expression detector functional to selectively detect expression of at least one gene.

15. (withdrawn) An anti-viral substance capable of neutralizing said RNA of claim 1.

16. (withdrawn) A substance according to claim 15 and wherein said neutralizing comprises complementarily binding said RNA.

17. (withdrawn) A substance according to claim 15 and wherein said neutralizing comprises immunologically neutralizing.

18. (withdrawn) A method for anti-viral treatment comprising neutralizing said RNA of claim 1.

19. (withdrawn) A method according to claim 18 and wherein said neutralizing comprises: synthesizing a complementary nucleic acid molecule, a nucleic sequence of which complementary nucleic acid molecule is a partial inversed-reversed sequence of said RNA; and transfecting host cells with said complementary nucleic acid molecule, thereby complementarily binding said RNA.

20. (withdrawn) A method according to claim 18 and wherein said neutralizing comprises immunologically neutralizing.

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